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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,915	09/24/2003	Luiz Marcelo Aucelio Paternostro	CA920020063US1	8477
25259	7590	03/06/2007	EXAMINER	
IBM CORPORATION			MITCHELL, JASON D	
3039 CORNWALLIS RD.				
DEPT. T81 / B503, PO BOX 12195			ART UNIT	PAPER NUMBER
REASEARCH TRIANGLE PARK, NC 27709			2193	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE		DELIVERY MODE
3 MONTHS		03/06/2007		ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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[RSWIPLAW@us.ibm.com](mailto:RSWIPLAW@us.ibm.com)

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/671,915	PATERNOSTRO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jason Mitchell	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 24 September 2003.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 24 September 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims 1-20 are pending in this application.

### *Claim Objections*

2. **Claim 19 is objected to because of the following informalities:**

**The claim is improperly dependent upon itself.** For this examination the claim will be treated as dependent on claim 18. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 2 recites the limitation "said units test" in line 2. There is insufficient antecedent basis for this limitation in the claim.

For this examination, the limitation will be read as "said unit tests".

### *Drawings*

5. **Figures 1-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated.** See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-2, 4-6, 12-13, 15-16 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,031,990 to Sivakumar et al. (Sivakumar).**

8. **Regarding Claims 1, 12, 15 and 18:** Sivakumar discloses a method for tracking unit tests of a software application, said method comprising the steps of:

(a) conducting unit tests on a software application, said unit tests ordered under hierarchical groupings (col. 3, lines 8-9 “A test hierarchy”); and  
(b) tracking said unit tests so as to capture a result of each of said unit tests and a hierarchical position of each of said unit tests within said hierarchical groupings (col. 2, lines 58-61 “A “test case” ... records the result”).

9. **Regarding Claims 2, 13, 16 and 19:** The rejection of claims 1, 12, 15 and 18 are incorporated respectively; further; Sivakumar discloses the step of:

(c) outputting the hierarchical position of each of said units test in association with the corresponding result (Fig. 4).

10. **Regarding Claim 4:** The rejection of claim 1 is incorporated; further Sivakumar discloses said unit tests are grouped within a test suite, said test suite comprising a highest order grouping of said unit tests (Fig. 1, Root node 10), said test suite grouping containing at least one test case, each test case comprising a sub-grouping of said test suite (Fig. 1, Test Class 12).

11. **Regarding Claim 5:** The rejection of claim 4 is incorporated; further Sivakumar discloses a sub-set of said unit tests is grouped within one test case (Fig. 1, Test Case 14).

12. **Regarding Claim 6:** The rejection of claim 5 is incorporated; further Sivakumar discloses one or more other test cases are grouped within said one test case, each of said other test cases comprising a sub-grouping of said one test case (col. 2, lines 63-67 "A test class is an abstract collection of ... one or more other test classes").

#### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**14. Claims 3, 7-8, 14, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,031,990 to Sivakumar et al. (Sivakumar) in view of US 5,671,351 to Wild et al. (Wild).**

**15. Regarding Claims 3, 14, 17 and 20:** The rejection of claims 1, 13, 16 and 19 are incorporated respectively; further; Sivakumar does not disclose at least one of said unit tests is iteratively conducted multiple times.

16. Wild teaches at least one of said unit tests is iteratively conducted multiple times (col. 5, lines 65-67 “Iteration Count ... specifies the number of times the selected test cases will be executed”), and said method further comprises the step of:  
(d) each time one of said unit tests is conducted, associating an iteration ordinal indication with the result (Fig. 9, 9h).

17. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sivakumar and Wild to associate an iteration ordinal indication (Wild Fig. 9, 9h) with the result of each unit test (Sivakumar Fig. 1, Test Case 14) because “one test might otherwise interfere with another test or depend on the success or failure of another test” and “Each test in the hierarchy has an execution sequence number associated with it” (Sivakumar col. 3, lines 28-32).

18. **Regarding Claim 7:** The rejection of claim 6 is incorporated further Sivakumar does not disclose at least one of said other test cases is iteratively conducted.

19. Wild teaches at least one of said other test cases is iteratively conducted (col. 5, lines 65-67 “Iteration Count ... specifies the number of times the selected test cases will be executed”).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sivakumar and Wild to associate an iteration ordinal indication (Wild Fig. 9, 9h) with the result of each unit test (Sivakumar Fig. 1, Test Case 14) because “one test might otherwise interfere with another test or depend on the success or failure of another test” and “Each test in the hierarchy has an execution sequence number associated with it” (Sivakumar col. 3, lines 28-32)

21. **Regarding Claim 8:** The rejection of claim 3 is incorporated further Sivakumar discloses said associating step further comprises instantiating at least one of a test case class (Fig. 1, Test Class 12) and a test suite class (Fig. 1, Root node 10), said test case class and said test suite class being associated with methods for, in respect of a given unit test, getting a parent of a sub-grouping to which said given unit test belongs (col. 4, lines 33-41 “contextual information such as the hierarchy information ... are available to the test”).

22. Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include Wild's iteration ordinal (Fig. 9, 9h) as part of Sivakumar's "contextual information" (col. 4, lines 33-41)

23. **Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,031,990 to Sivakumar et al. (Sivakumar) in view of US 5,671,351 to Wild et al. (Wild) in view of the JUnit 3.7 (JUnit).**

24. **Regarding Claim 9:** The rejection of claim 8 is incorporated; further Sivakumar does not disclose, wherein said test case class extends a test case class and said test suite class extends a unit test suite class.

25. JUnit teaches extending a test case class and a test suite class (see e.g. the definition of Class TestSuite "public class MathTest extends TestCase").

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Sivakumar-Wild combination with the teachings of JUnit because "JUnit is a simple framework to write repeatable tests" (JUnit 3.7 pg. 1 par. 1)

27. **Regarding Claim 10:** The rejection of claim 9 is incorporated; further Sivakumar discloses said unit tests are conducted by an instantiation of a runner within an

instantiation of a framework (col. 1, lines 64-67 "executing a run command of the test case"), said test case class and said test suite class being part of said framework (col. 1, lines 19-23 "a software infrastructure").

28. **Regarding Claim 11:** The rejection of claim 10 is incorporated; further It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the system taught by the Sivakumar-Wild combination compliant with JUnit because JUnit is a simple framework to write repeatable tests" (JUnit 3.7 pg. 1 par. 1).

### ***Conclusion***

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2193

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jason Mitchell  
2/28/07

  
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